

National Wetlands Inventory Map Report
For The
Ventura County, California

Project ID: R01Y05P07: CSUN Ventura County Update Project

Project Area:

Los Angeles SW:	
Santa Paula Peak	(06/02 CIR)
Saticoy	(06/02 CIR)
Santa Paula	(06/02 CIR)
Camarillo	(06/02 CIR)
Los Angeles SE:	
Moorpark	(06/02 CIR)
Newberry Park	(06/02 CIR)
Simi Valley West	(06/02 CIR)
Thousand Oaks	(06/02 CIR)
Calabasas	(06/02 CIR)

Source Imagery:

Citation: For all quads listed above:

Citation_Information:

Originator: AirPhotoUSA, LLC

Publication_Date: January 2003

Title: Ventura-CIR27-03.Map

Geospatial_Data_Presentation_Form: remote-sensing image

Other_Citation_Details:

2 foot ground resolution, 2,150 square miles

Description:

Abstract:

AirPhotoUSA imagery is color infra-red, high resolution, seamless digital ortho-rectified aerial photography.

Purpose:

The purpose of this data set is to provide visual information through current and accurate Aerial Photography, supplemented with geographical data. These Aerial Datasets have been produced as a result for the need to have geospatial data immediately available and accessible for a wide variety of end-users.

Time_Period_of_Content:

Time_Period_Information:

Single_Date/Time:

Calendar_Date: January 2003

Currentness_Reference: publication date January 2003

Collateral Data:

- USGS 1:24,000 topographic quadrangles
- NAPP, 1:40 K, CIR, aerial photography
Los Angeles SW: June 2002
Los Angeles SE: June 2002
- Natural Vegetation of the Ventura River, David Magney
- USGS Digital Raster Graphics (DRG's)
- Soil Survey of Ventura Area, California
- USGS - NHD – National Hydrography Dataset
- USGS – DEM – Digital Elevation Model – 10 Meter resolution

Inventory Method: The delineations were done “heads-up” in ArcMap using ARCGIS 9.x software on AirPhoto USA ortho-rectified CIR Imagery (2-foot ground resolution). Imagery was acquired during January 2003. Collateral aerial photography (NAPP 06/2002 CIR, 1:40,000 scale) was used on a 4X mirror stereoscope for stereoscopic interpretation.

Field reconnaissance was conducted in March 2004. The purpose of the field work was to correlate varying signatures found on the photography to actual ground conditions. Vegetation, soils, and hydrologic conditions were examined at field sites.

Data Limitations: The user of the map is cautioned that, due to the limitation of mapping primarily through aerial photo interpretation, a small percentage of wetlands may have gone unidentified. Since the photography was taken during a particular time and season, there may be discrepancies between the map and current field conditions. Changes in landscape which occurred after the photography was taken would result in such discrepancies. Aerial photo interpretation and heads-up mapping were completed in the USFWS NWI Region 1 office in Portland, Oregon by regional staff.

Classification: The wetland classifications that appear in the Ventura County National Wetlands Inventory (NWI) Maps are in accordance with the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). The riparian classifications that appear on these maps are in accordance with *A System for Mapping Riparian Areas in the Western United States* (USFWS 1998). Hydrogeomorphic attribution follows

General Description of the Project Area:

The project area encompasses nine 1:24,000 USGS quads in Ventura County, California. The project area includes the communities of Simi Valley, Thousand Oaks, Camarillo, and Newberry Park. The Ventura County Project is comprised of two distinct areas with similar topography, climate, and land use. The first is composed of high plateau-mountain valleys, and large areas of steep and very steep brush covered slopes. It includes the Los Padres National Forest (which encompasses the majority of the northern half of the County), the Santa Ynez and Topatopa Mountains and other local mountain masses. Elevations range from 2,000 to nearly 8,000 feet.

Annual precipitation is generally 16 to 30 inches with as much as 40 inches in small forested areas at higher elevations. Precipitation occurs mostly in the winter but with scattered summer showers. Temperatures are generally mild but killing frosts are probable at higher elevations and in cold pockets every month in the year. Summer daytime temperatures are high. This area is primarily used for watershed and recreation.

The second area in the Ventura County Project is known as the "Citrus Belt". It is very complex geologically and includes valleys, marine terraces, beaches, sand dunes and gently to steeply sloping hills and mountains. Elevations range from sea level to 2,000 feet. Rainfall ranges from 10 to 20 inches, all of which falls in the winter and spring. Winter rains of moderate intensity, mild winters and fog along the coast characterize the climate. The mild climate has flavored the development of intensive agriculture, including subtropical fruits.

Part of the Ventura area is on the Coastal Plain, and part is on the Coastal Mountains and in the intermountain valleys of the Transverse Range.

Ventura County has been farmed since the establishment of Mission San Buenaventura in 1792. Farming and ranching took place to support the mission's colony. Irrigation on a large scale was introduced during the decade from 1880 to 1890, bringing change to the existing agriculture. Walnuts and apricots were introduced, and for a time they were the only major crops. Later, lima beans were grown extensively. Presently, the main money crops are lemons, oranges, strawberries, avocados and nursery stock.

Ventura County now supports a large urban population with residents working in this county and Los Angeles. Cities directly adjacent to the Los Angeles County border such as Thousand Oaks and Simi Valley are considered bedroom communities to the Los Angeles Metropolitan area. Commuters begin their journey to Los Angeles from other parts of Ventura County and from as far away as Santa Barbara.

The military also supports the economy of Ventura County with installations at Port Hueneme and Point Mugu. Camarillo also has a State University located at the old Camarillo State Hospital site.

The oil industry also helps support Ventura County. Oil was first produced in 1886. Oil refining, citrus packing, vegetable processing, and sand and gravel works help make up support industries for agriculture and oil.

A diversity of wetlands occurs within Ventura County. Tidally influenced areas support marine, estuarine and fresh tidal wetlands. The complex geology of the “Citrus Belt” supports wet meadows, vernal pools, springs, lacustrine fringe wetlands, and fluvial wetland systems. In the higher elevations of the Los Padres National Forest, wetlands are found in river canyons adjacent to seasonal or permanent sources of water. There are many small springs scattered throughout this region of the project area. Often, springs are associated with geologic faults, deep canyons, and mountain valleys.

In addition to wetlands, riparian habitats are being mapped for this project area. Most of the riparian areas identified on the mapping are shrub or forest communities associated directly with rivers, streams and washes. The most common woody riparian species include willow, cottonwood, coast live oak, big leaf maple, baccharis, white alder, and arrundo. In many areas the woody vegetation grows in dry washes where they form a “riparian” community that is distinct from the surrounding upland chaparral or woodland communities.

Description of attribute values:

WETLAND ATTRIBUTE	DESCRIPTION
E1UBL	Permanently flooded deepwater tidal habitat with low energy and variable salinity, influenced and often semi-enclosed by land.
E2ABN	Regularly flooded, intertidal aquatic bed.
E2EMN	Regularly flooded, intertidal salt marsh characterized by erect, rooted, herbaceous hydrophytes.
E2EMP	Irregularly flooded, intertidal salt marsh characterized by erect, rooted, herbaceous hydrophytes.
E2SSP	Irregularly flooded, intertidal brackish wetland characterized by woody vegetation less than 20 feet tall.
E2USN	Regularly flooded, intertidal flat with less than 30 percent vegetative cover.
E2USP	Irregularly flooded, intertidal flat with less than 30 percent vegetative cover.
L1UBHh	Permanently flooded, deepwater habitat greater than 20 acres in size that is created by an impoundment (e.g., reservoir).
L2EMAh	Temporarily flooded Lacustrine fringe wetland characterized by erect, rooted, herbaceous hydrophytes. Wetland supported or created by an impoundment (e.g., reservoir fringe)
L2EMCh	Seasonally flooded Lacustrine fringe wetland characterized by erect, rooted, herbaceous hydrophytes. Wetland supported or created by an impoundment (e.g., reservoir fringe)
L2RSChr	Seasonally flooded Lacustrine shoreline characterized by large boulders or other substrate emplaced by man (r). Wetland supported or created by an impoundment (e.g., reservoir fringe)
L2UBFh	Semi-permanently flooded, open water habitat extending from the shoreward boundary to a depth of 2 meters that is supported or created by an impoundment (e.g., reservoir).
L2UBHh	Permanently flooded, open water habitat extending from the shoreward boundary to a depth of 2 meters that is supported or created by an impoundment (e.g., reservoir).

L2USCh	Seasonally flooded Lacustrine fringe unvegetated wetland characterized by less than 30 percent cover of erect, rooted, herbaceous hydrophytes. Wetland supported or created by an impoundment (e.g., reservoir fringe)
M1ABL	Permanently flooded, open ocean and high energy coastlines, with at least 30 percent coverage by aquatic beds (e.g., kelp).
M1UBL	Permanently flooded, open ocean deepwater habitat.
M2ABN	Regularly flooded, high energy shorelines, with at least 30 percent coverage by aquatic beds.
M2RSN	Regularly flooded, high energy coastlines characterized by large boulders or bedrock.
M2RSP	Irregularly flooded, high energy coastlines characterized by large boulders or bedrock.
M2USN	Regularly flooded, high energy marine beaches and bars, with less than 30 percent vegetative cover.
M2USP	Irregularly flooded, high energy marine beaches and bars, with less than 30 percent vegetative cover.
PABFh	Semi-permanently flooded ponds vegetated with aquatic beds (e.g., pondweed) and created by the construction of an impoundment.
PABHh	Permanently flooded ponds vegetated with aquatic beds (e.g., pondweed) and created by the construction of an impoundment.
PEM/SSC	Seasonally flooded depressions and floodplains characterized by a matrix of herbaceous and scrub-shrub vegetation.
PEMA	Temporarily flooded wetlands dominated by herbaceous vegetation.
PEMB	Wetlands dominated by herbaceous vegetation in depressions or below springs where the water table is usually at or near the surface.
PEMC	Seasonally flooded wetlands dominated by herbaceous vegetation.
PEMF	Semi-permanently flooded depressions dominated by herbaceous vegetation.
PFO/SSA	Temporarily flooded depressions and floodplains characterized by a matrix of forested and scrub-shrub vegetation.
PFOA	Temporarily flooded depressions and floodplains dominated by forested vegetation.

PFOB	Saturated forested wetland usually associated with springs. Common tree species include willow and cottonwood.
PFOC	Seasonally flooded depressions and floodplains dominated by forested vegetation.
PFOS	Temporarily flooded, freshwater tidal floodplains and banks dominated by forested vegetation.
PSS/FOA	Temporarily flooded depressions and floodplains characterized by a matrix of scrub-shrub and forested vegetation.
PSS/USA	Temporarily flooded depressions and floodplains characterized by a matrix of sparse scrub-shrub vegetation and unconsolidated substrate.
PSSA	Temporarily flooded scrub-shrub wetland usually located in drainages.
PSSB	Saturated scrub-shrub wetland usually associated with springs.
PSSC	Seasonally flooded scrub-shrub wetland usually located in drainages.
PSSR	Seasonally flooded, freshwater tidal floodplains and banks that are dominated by scrub-shrub vegetation.
PSSS	Temporarily flooded, freshwater tidal floodplains and banks that are dominated by scrub-shrub vegetation.
PUBF	Semi-permanently flooded ponds.
PUBHh	Permanently flooded pond created behind an impoundment.
PUBHx	Permanently flooded pond created by excavation.
PUBKr	Artificially flooded pond with an artificial substrate (e.g., sewage detention pond).
PUSA	Temporarily flooded basins with little or no vegetation.
PUSC	Seasonally flooded basins with little or no vegetation.
R1UBV	Permanently flooded, tidally influenced riverine deepwater habitat.
R1USR	Seasonally flooded, freshwater tidal floodplains and banks that are characterized by unconsolidated substrate and little or no vegetation.
R2EMC	Seasonally flooded herbaceous wetlands associated with lower perennial riverine systems.
R2UBH	Permanently flowing lower perennial rivers.
R2USA	Temporarily flooded unconsolidated substrate associated with lower perennial riverine systems.
R2USC	Seasonally flooded unconsolidated substrate associated with lower perennial riverine systems.

R3EMF	Semi-permanently flooded herbaceous wetlands associated with upper perennial riverine systems.
R3UBH	Permanently flowing upper perennial rivers.
R3USA	Temporarily flooded unconsolidated substrate associated with upper perennial riverine systems.
R3USC	Seasonally flooded unconsolidated substrate associated with upper perennial riverine systems.
R4SBA	Temporarily flowing riverine channels.
R4SBC	Seasonally flowing riverine channels.
R4SBJrx	Intermittently flooded streambeds or intermittently flooded canal systems where the channel has been excavated and the substrate is not natural (e.g., concrete).
Rp1EM	Riparian grassland areas adjacent to rivers. These areas may be flooded on a rare basis. Generally found on banks above an incised channel, where the roots utilize elevated water tables associated with streams.
Rp1FO	Riparian Forested areas adjacent to rivers. These areas may be flooded on a rare basis. Generally found on banks above an incised channel, where the roots utilize elevated water tables associated with streams. At higher elevations plants are found closer together than at drier, lower elevations. At higher elevations and near permanent water cottonwood and willow are common species. Other species found in riparian zones include alder, coast live oak, big leaf maple, and sycamore.
Rp1SS	Riparian Scrub-shrub areas adjacent to rivers. These areas may be flooded on a rare basis. Generally found on banks above an incised channel, where the roots utilize elevated water tables associated with streams. At higher elevations plants are found closer together than at drier, lower elevations. At higher elevations and near permanent water cottonwood and willow are common species. At lower elevations riparian communities are dominated by a mix of shrubs such as baccharis, manzanita, cottonwood, arrundo, and sumac.
Rp2EM	Riparian grassland areas associated with lentic systems such as ponds, lakes or reservoirs.
Rp2FO	Riparian forested areas associated with lentic systems such as ponds, lakes or reservoirs.

Description of Special Modifiers:

SPECIAL MODIFIER	DESCRIPTION
h	Diked/Impounded - Created or modified by a man-made barrier or dam which obstructs the inflow or outflow of water.
r	Artificial - Substrates classified as Rock Bottom, Unconsolidated Bottom, Rocky Shore and Unconsolidated Shore that were emplaced by man using natural or synthetic materials.
x	Excavated - Lies within a basin or channel excavated by man.

Partial list of wetland and riparian plant species with indicator status (USFWS 1988):

Botanical Name	Common Name	Indicator Status
<i>Acacia greggi</i>	cats claw	FACU
<i>Acer macrophyllum</i>	bigleaf maple	FACU
<i>Acer negundo</i>	box elder	FAC+
<i>Achillea millefolium</i>	yarrow	FACU
<i>Alnus rhombifolia</i>	white alder	FACW
<i>Alnus rubra</i>	red alder	FACW
<i>Ambrosia chamissonis</i>	beach bur	FACU
<i>Arctostaphylos glauca</i>	bigberry manzanita	U
<i>Artemisia californica</i>	California sagebrush	U
<i>Arundo donax</i> *	giant reed	FACW
<i>Atriplex californica</i>	California saltbush	FAC
<i>Baccharis douglasii</i>	saltmarsh baccharis	OBL
<i>Baccharis pilularis</i>	coyote brush	FACW
<i>Baccharis salicifolia</i>	mulefat	FACW
<i>Bromus carinatus</i> *	California brome	FAC
<i>Carex spp.</i>	sedges	FAC-OBL
<i>Cesidium floridum</i>	palo verde	U
<i>Cuscuta denriculata</i>	dodder	U
<i>Cytisus scoparius</i> *	scotch broom	
<i>Distichlis spicata</i>	saltgrass	FACW
<i>Eliocharis sp.</i>	spikerush	FACW-OBL
<i>Equisetum telmateia</i>	giant horsetail	FACW
<i>Eriodictyon sp.</i>	buckwheat	U
<i>Eryngium vaseyi</i>	coyote thistle	FACW

<i>Fraxinus sp.</i>	ash	FACW
<i>Juncus sp.</i>	rushes	FACU-OBL
<i>Lemna sp.</i>	duckweed	OBL
<i>Mentha arvensis*</i>	field mint	FAC
<i>Mimulus sp.</i>	monkeyflower	FAC-OBL
<i>Phacella camanularia vasiformis</i>	desert bluebells	U
<i>Platanus racemosa</i>	sycamore	FACW
<i>Populus balsamifera</i>	black cottonwood	FAC
<i>Populus fremontii</i>	fremont cottonwood	FACW
<i>Populus trichocarpa</i>	balsam poplar	FACW
<i>Potamogeton sp.</i>	pondweed	OBL
<i>Potentilla sp.</i>	cinquefoil	FAC-OBL
<i>Prosopis glandulosa</i>	honey mesquite	U
<i>Prosopis juliflora</i>	mesquite	FACU
<i>Psoralea argyrea</i>	smoketree	U
<i>Quercus agrifolia</i>	coast live oak	U
<i>Ranunculus sp.</i>	buttercup	FAC-OBL
<i>Rosa californica</i>	rose	FAC+
<i>Rumex crispus*</i>	curly dock	FACW
<i>Salicornia virginica</i>	pickleweed	OBL
<i>Salix spp.</i>	willows	FAC-OBL
<i>Scirpus arutus</i>	hardstem bulrush	OBL
<i>Scirpus sp.</i>	bulrush	FACW-OBL
<i>Tamarix ramosissima*</i>	salt cedar	FAC
<i>Typha angustifolia</i>	cattail	OBL
<i>Typha domingensis</i>	southern cattail	OBL
<i>Vulpia myuros</i>	foxtail fescue	FAC
<i>Washingtonia filifera</i>	fan palm	FACW
* non-native - invasive		

Regional specialized conventions:

In some cases, the addition of Hydrogeomorphic (HGM) Codes to the wetland polygons created adjacent polygons with identical Cowardin Classification Attributes. Examples of this would be an intermittent stream channel (R4SBC) that originates in the Montane Landscape Geomorphic Setting and travels through the Foothill Landscape Geomorphic Setting and ultimately into the Valley Landscape Geomorphic Setting. In this example, the continuous R4SBC polygon will be divided into three segments and coded with the appropriate HGM attribute.

Other discussion of mapping issues (image quality, water conditions, etc.):

N/A

References:

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. Laroe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. United States Department of the Interior, Fish and Wildlife Service, FWS/PBS 79/81, Washington, D.C.

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